



## TRANSPORTATION ADVISORY COMMITTEE.

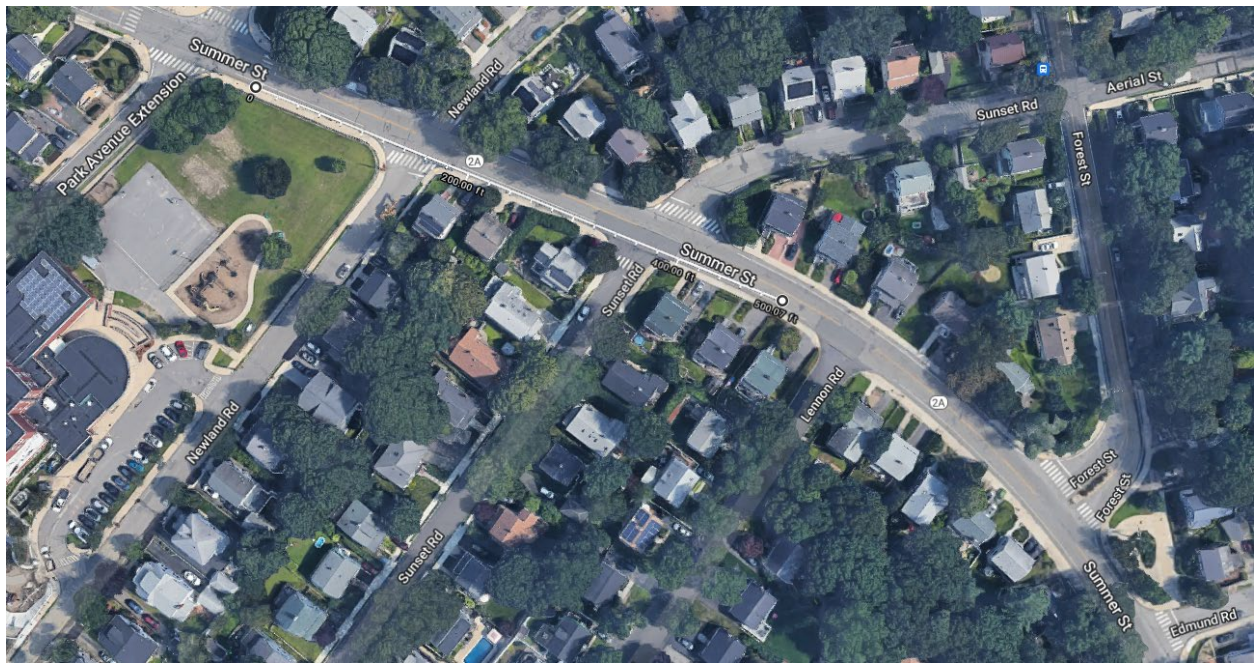
Arlington Planning Department, 730 Mass Ave,  
Arlington MA, c/o Daniel Amstutz.

**Date:** October 14, 2022  
**From:** Ray Jones and Shoji Takahashi  
**To:** Transportation Advisory Committee (TAC)  
**Subject:** Request for Crosswalk Across Summer St at Newland Rd for Peirce Elementary School.

### Memorandum

**Background.** On September 28, 2021, the Select Board referred a request from residents on Sunset Road near Peirce Elementary School for a crosswalk across Summer St at Newland Rd. The residents have two young children attending Peirce Elementary School.

A crosswalk at Newland Rd would be less than 200' from the traffic signal at Park Ave Ext, and would not meet the TAC Marked Crosswalk Guideline (January 8, 2019) of a minimum of 200' between an uncontrolled crosswalk and a signalized intersection. A crosswalk at Sunset Rd is a viable alternative location for pedestrians to cross Summer St.



**Existing Conditions.** Summer St (Route 2A) near Peirce School is a two-lane road with a double-yellow center line and striped shoulders. The speed limit is 25 mph, and there are sidewalks on both sides of the road. Summer St adjacent to the school grounds (between Newland Rd and Park Ave Ext) is not marked as a designated school zone. The school grounds in this location are separated from the sidewalk with a chain-link fence atop a shoulder-high retaining wall.

There are no stop signs and no marked crosswalks across Summer St on the approximately quarter-mile section between traffic signals at Park Ave Ext and Forest St<sup>1</sup>. There are marked crosswalks at the signalized intersections.

Summer St is straight without visual obstructions from before Park Ave Ext on the west to about Lennon Rd on the east where it begins to curve rightward traveling eastbound. Eastbound drivers can see the Sunset Rd intersection from a distance of more than 400'. Westbound drivers can see the Sunset Rd intersection from a distance of more than 350'.

**Observed Pedestrian Movements During Peirce Arrival.** TAC members observed Peirce School arrival on Friday, November 5, 2021, from 7:45 – 8:20am. The weather was clear and sunny with temperatures in the mid-30s F.

The pedestrian composition was similar to the dismissal period described above. Pedestrians crossed Summer St along the corridor between Newland Rd and Sunset Rd, including midblock crossings. (Many pedestrians crossed Summer St at the signalized intersection at Park Ave Ext. We did not record those arriving to the school from the north or west.)

During the 35-min observation period, there were 31 pedestrians crossing Summer St near the Sunset Rd intersection; and 10 pedestrians crossing at Newland Rd. Four pedestrians walked west along Summer St and crossed at the Park Ave Ext crosswalk.



<sup>1</sup> The Forest St. signalized intersection is approximately 400' southeast of Forest St Northbound.



**Observed Pedestrian Movements During Peirce Dismissal.** TAC members observed Peirce School dismissal on Wednesday, November 3, 2021, from 2:30 – 2:45pm. The weather was clear and sunny with temperatures in the high-40s F. Pedestrians crossing Summer St included students, guardians, dog walkers, and people on bicycles. Students were observed alone, with other students, and with adults.

Pedestrians crossed Summer St along the corridor between Newland Rd and Sunset Rd, including midblock crossings. (Many pedestrians crossed Summer St at the signalized intersection at Park Ave Ext. Pedestrians moving away from the school to the north or west were not recorded.)

During the 15-min observation period, there were 21 pedestrian crossings across Summer St near the Sunset Rd intersection; and 6 pedestrian crossings at Newland Rd. Six pedestrians crossed at the Park Ave Ext crosswalk and then walked east along Summer St.



**Analysis & Recommendations.** There are no marked crosswalks across Summer St between traffic signals at Park Ave Ext and Forest St. However, MassDOT’s “Municipal Resource Guide for Walkability (2019)” advises “Crosswalks should be spaced **200’ to 300’** apart in developed areas, though up to **500’** is acceptable. It is a best practice to provide a crosswalk on all legs of a signalized intersection [emphasis in original]”<sup>2</sup>

The residents writing to the Select Board requested a crosswalk at Summer St and Newland Rd, which is just less than 200’ from the signalized intersection of Park Ave Ext. As an alternative, TAC recommends installing a marked crosswalk across Summer St at the west side of Sunset Rd.

Possible placement of the crosswalk is just to the west of the utility pole and fire hydrant (on the southside), and between the driveway curb cuts of houses 537 Summer St and 541 Summer St

<sup>2</sup> see pps 16-17. [https://www.mass.gov/files/documents/2019/06/13/2019\\_Municipal\\_Resources\\_Guide-Walkability\\_0.pdf](https://www.mass.gov/files/documents/2019/06/13/2019_Municipal_Resources_Guide-Walkability_0.pdf)

(on the northside). This location offers the shortest crossing distance and avoids possible challenges with driveway curb cuts and storm drains located closer to the intersection of Sunset Rd.



*1Left: view of southside Summer St between 534 and 538 Summer St. Right: view of northside Summer St between driveway curb cuts of 537 and 541 Summer St.*

This recommendation for a marked crosswalk is consistent with the following TAC Crosswalk Guidelines:

- An uncontrolled crosswalk should not be placed within 200' of a crosswalk that is controlled by a traffic signal.
- "A higher priority should be given to locations having a minimum of 20 pedestrian crossing per peak hour (or 15 elderly and/or children).
- The Guidelines state: "Visibility: the pedestrian in the crosswalk needs to be visible from far enough away so that a driver has time to react and stop. For vehicle speeds of 20, 25, 30 and 35 mph, the minimum recommended sight distances are 115, 155, 200 and 250 feet, respectively (MassHighway (now MassDOT) 2006). **The 85th percentile speed or posted speed, whichever is higher, should be used for determining sight distance.** [emphasis in original]"

The speed limit at this location is the Town wide default of 25 mph. The minimum recommended stopping sight distance for 25 mph is 155'. On the conservative side, if the 85<sup>th</sup> percentile speed at this location is 35 mph, the minimum recommended sight distance would be 250', which is well within the MassDOT recommendations.



*2Left: Summer St looking west from Forest St. Right: View magnified with purple oval showing the Sunset Rd intersection. The white picket fence is 529 Summer St, on the eastside of Sunset Rd; the brown fence and red house is on the west side of Sunset Rd.*

Notably, Principal Andrew Ahmadi of Peirce School requested an Arrival and Dismissal Audit by MassDOT's Safe Routes to School (SRTS) Program. Judy Crocker of SRTS agreed with the recommendations for an additional crosswalk across Summer St near Sunset Rd.

As part of installing a crosswalk at Sunset Rd, the Town should install crosswalk signs and advance warning signs in both directions.

The Town also should consider the following:

1. Adding a Traffic Supervisor to assist in crossing Summer St at Sunset Rd.
2. Designating no parking within 20' before the crosswalk per the Guidelines. However, automobiles generally do not park on the shoulder of this stretch of Summer St.